

Maths Progression of Skills

Number and Place Value	F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
	Recite numbers past 5.	Count beyond 10 to 20.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.	Count in multiples of 6, 7, 9, 25 and 1000. Count backwards through zero to include negative numbers.	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	Use negative numbers in context, and calculate intervals across zero.
	Count objects- Saying one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Fast recognition of up to 3 objects, without having to count them individually (subitise)	Count objects, actions and sounds Subitise up to 5	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.	Recognise the place value of each digit in a two-digit number (tens, ones) and use number facts to solve problems	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) and use number facts to solve problems	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) and solve problems with increasingly large positive numbers.	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit and solve number problems.	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit and use to solve problems.
	Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to	Link the number symbol (numeral) with its cardinal number value.	Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less	Identify, represent and estimate numbers using different representations, including the number line.	Identify, represent and estimate numbers using different representations.	Identify, represent and estimate numbers using different representations.	-	-

	match the numeral, up to 5.		than (fewer), most, least.					
	Compare quantities using language: 'more than', 'fewer than'.	Understand the 'one more than/one less than' relationship between consecutive numbers. Compare quantities up to 10 in different contexts	Given a number, identify one more and one less	Compare and order numbers from 0 up to 100; use <, > and = signs.	Compare and order numbers up to 1000.	Order and compare numbers beyond 1000. Round any number to the nearest 10, 100 or 1000.	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.	Round any whole number to a required degree of accuracy.
						Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.		

Maths Progression of Skills

Addition and Subtraction

F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
Solve real world mathematical problems with numbers up to 5	Explore the composition of numbers to 10.	Represent and use number bonds and related subtraction facts within 20.	Recall and use addition and subtraction facts to 20 fluently				
	Automatically recall number bonds for numbers 0–10. (Including subtraction facts)	Add and subtract one-digit and two-digit numbers to 20, including zero.	Add and subtract numbers using concrete objects, pictorial representations, and mentally two two-digit numbers	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers with up to 4 digits using the written methods of addition and subtraction where appropriate.	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	
		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.	Using concrete objects and pictorial representations, including those involving numbers, quantities and measures;	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
			Applying their increasing knowledge of mental and written methods.	Add and subtract numbers mentally including a three-digit number and ones, a three-digit number and tens and a three-digit number and hundreds.		Add and subtract numbers mentally with increasingly large numbers [for example, $12,462 - 2300 = 10,162$].	
			Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Estimate the answer to a calculation and use inverse operations to check answers.	Estimate and use inverse operations to check answers to a calculation.	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Maths Progression of Skills

Multiplication and Division	F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
		Explore and represent patterns within numbers up to 10, including double facts.		Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Recall and use multiplication and division facts for the 3, 4 and 8 times table	Recall multiplication and division facts for multiplication tables up to 12 x 12.		Perform mental calculations, including with mixed operations and large numbers.
		Automatically recall doubling facts up to 10.		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to written methods.	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.
							Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.
		Explore and represent patterns within numbers up to 10, including how quantities can be distributed equally.		Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		Recognise and use factor pairs and commutativity in mental calculations	Solve problems by identifying multiples and factors, common factors of two numbers and identifying square and cube numbers.	Identify common factors, common multiples and prime numbers.
		Solve one-step problems by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Solve problems using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.	Solve problems, including missing number problems, including positive integer scaling problems and correspondence problems in which n	Solve problems using the distributive law to multiply two-digit numbers by one digit, using integer scaling and correspondence problems such as n	Solve problems involving multiplication and division and a combination of these, including understanding the	Solve problems involving multiplication and division and check using estimation.	

					objects are connected to m objects.	objects are connected to m objects.	meaning of the equals sign.	
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Maths Progression of Skills

Fractions, decimals and percentages	F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
		Understanding and finding one half of shapes and quantities.	Recognise, find and name a half as one of two equal parts of an object, shape or quantity.	Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, and set of objects or quantity.	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.	Recognise and show, using diagrams, families of common equivalent fractions.	Compare and order fractions whose denominators are all multiples of the same number.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
			Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	Compare and order fractions, including fractions > 1 .
					Recognise and use fractions as numbers: unit fractions (numerator of 1) and non-unit fractions with small denominators.	Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $2\frac{5}{5} + \frac{4}{5} = 6\frac{5}{5} = 1\frac{1}{5}$].	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
					Recognise and show, using diagrams, equivalent fractions with small denominators.	Add and subtract fractions with the same denominator.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$].
					Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$].	Recognise and write decimal equivalents of any number of tenths or hundredths.	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$].

					Compare and order unit fractions, and fractions with the same denominators.	Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.	Read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$].	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$].
					Solve problems that involve all of the above.	Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	
						Round decimals with one decimal place to the nearest whole number.	Round decimals with two decimal places to the nearest whole number and to one decimal place.	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.
						Compare numbers with the same number of decimal places up to two decimal places.	Read, write, order and compare numbers with up to three decimal places.	Multiply one-digit numbers with up to two decimal places by whole numbers.
						Solve simple measure and money problems involving fractions and decimals to two decimal places.	Solve problems involving number up to three decimal places.	Use written division methods in cases where the answer has up to two decimal places.
							Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.	Solve problems which require answers to be rounded to specified degrees of accuracy.
							Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Maths Progression of Skills

Measurement	F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
Measurement	Make comparisons between objects relating to size, length, weight and capacity.	Compare length, weight and capacity using the comparative language "than".	<i>Compare, describe and solve practical problems for:</i> lengths and heights, mass/weight, capacity, volume and time	<i>Choose and use appropriate standard units to estimate and measure to the nearest appropriate unit,</i> Length/height in any directions. Mass (kg/g) Temperature (C) Capacity (litres/m)	<i>Measure, compare, add and subtract:</i> Length (m/cm/mm) Mass (kg/g) Volume/capacity (l/ml)	Convert between different units of measure [<i>for example, kilometre to metre; hour to minute</i>]	Convert between different units of metric measure (<i>for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre</i>).	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
			Measure and record lengths and heights, mass/weight, capacity, volume and time	Compare and order lengths, mass, volume/capacity and record the results using >, < and =.	Measure the perimeter of simple 2-D shapes.	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
			Recognise and know the value of different denominations of coins and notes.	Recognise and use symbols for pounds (£) and pence (p); Recognise and combine amounts to make a particular value	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Estimate, compare and calculate different measures, including money in pounds and pence.	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	Convert between miles and kilometres.
			Sequence events in chronological order using language [<i>for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening</i>].	Find different combinations of coins that equal the same amounts of money.	an analogue clock and 12-hour and 24-hour clocks; including roman numerals.	Estimate, compare and calculate different measures, including money in pounds and pence.	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and	Recognise that shapes with the same areas can have different perimeters and vice versa.

							estimate the area of irregular shapes.	
			Recognise and use language relating to dates, including days of the week, weeks, months and years.	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.	Read, write and convert time between analogue and digital 12- and 24-hour clocks.	Estimate volume [for example, using 1 cm ³ blocks to build cuboids (including cubes)] and capacity [for example, using water].	Recognise when it is possible to use formulae for area and volume of shapes. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm ³) and cubic metres (m ³), and extending to other units [for example, mm ³ and km ³].
			Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. Know the number of minutes in an hour and number of hours in a day.	Know the number of seconds in a minute and the number of days in each month, year and leap year.	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Solve problems involving converting between units of time.	Calculate the area of parallelograms and triangles.
				Compare and sequence intervals of time.	Compare durations of events [for example to calculate the time taken by particular events or tasks].		Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	

Maths Progression of Skills

Geometry	F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
	Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.	Select, rotate and manipulate shapes in order to develop spatial reasoning skills.	<i>Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles] 3-D shapes [for example, cuboids (including cubes), pyramids and spheres.</i>	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	Draw 2-D shapes and make 3-D shapes using modelling materials.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	Draw 2-D shapes using given dimensions and angles.
	Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'.		Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.	Recognise 3-D shapes in different orientations and describe them.	Identify acute and obtuse angles and compare and order angles up to two right angles by size.	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	Recognise, describe and build simple 3-D shapes, including making nets.
	Combine shapes to make new ones - an arch, a bigger triangle etc.	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.		Identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid].	Recognise angles as a property of shape or a description of a turn.	Identify lines of symmetry in 2-D shapes presented in different orientations.	Draw given angles, and measure them in degrees.	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.
				Compare and sort common 2-D and 3-D shapes and everyday objects.	Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.	Complete a simple symmetric figure with respect to a specific line of symmetry.	angles at a point and one whole turn (total 360); angles at a point on a straight line and 1/2 a turn (total 180) other multiples of 90.	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

	<p>Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.</p> <p>Extend and create AB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating AB pattern.</p>	<p>Continue, copy and create repeating patterns- AB, ABB, AAB, ABC, ABBC</p> <p>Notice and correct an error in repeating patterns.</p>		<p>Order and arrange combinations of mathematical objects in patterns and sequences.</p>	<p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</p>	<p>Describe positions on a 2-D grid as coordinates in the first quadrant.</p>	<p>Use the properties of rectangles to deduce related facts and find missing lengths and angles.</p>	<p>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>
	<p>Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'</p>			<p>Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise</p>		<p>Describe movements between positions as translations of a given unit to the left/right and up/down.</p>	<p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p>	<p>Describe positions on the full coordinate grid (all four quadrants).</p>

				and anti-clockwise).				
						Plot specified points and draw sides to complete a given polygon.	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Maths Progression of Skills

Statistics	F1	F2	Y1	Y2	Y3	Y4	Y5	Y6
		Understand and use a tally.	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	Interpret and present data using bar charts, pictograms and tables.	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	Solve comparison, sum and difference problems using information presented in a line graph.	Interpret pie charts and line graphs and use these to solve problems.	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.
			Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	Solve one-step and two-step questions [<i>for example, 'How many more?' and 'How many fewer?'</i>] using information presented in scaled bar charts and pictograms and tables.	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Complete, read and interpret information in tables, including timetables.	Interpret and construct pie charts and line graphs and use these to solve problems.	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.
				Ask and answer questions about totalling and comparing categorical data.			-	Calculate and interpret the mean as an average.